



**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2021-0610; Project Identifier AD-2021-00126-R]**

**RIN 2120-AA64**

**Airworthiness Directives; Brantly Helicopters Industries U.S.A. Co., Ltd., and Brantly International, Inc., Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** The FAA proposes to adopt a new airworthiness directive (AD) for certain Brantly Helicopters Industries U.S.A. Co., Ltd., Model 305 helicopters and Brantly International, Inc., Model B-2, B-2A, and B-2B helicopters. This proposed AD was prompted by a report of a crack in the tail rotor (T/R) hub. This proposed AD would require repetitive inspections of the T/R hub and depending on the results, removing the T/R hub from service. The FAA is proposing this AD to address the unsafe condition on these products.

**DATES:** The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Brantly International, Inc., Bill Ross, 621 S. Royal Lane, Suite 100, Coppell, TX, 75019; phone: (972) 829-4699; email: [bross@superiorairparts.com](mailto:bross@superiorairparts.com). You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

### **Examining the AD Docket**

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0610; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

**FOR FURTHER INFORMATION CONTACT:** Marc Belhumeur, Senior Project Engineer, Certification Section, Fort Worth ACO Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5177; email [9-ASW-FWACO@faa.gov](mailto:9-ASW-FWACO@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Comments Invited**

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0610; Project Identifier AD-2021-00126-R” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

## **Confidential Business Information**

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Marc Belhumeur, Senior Project Engineer, Certification Section, Fort Worth ACO Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5177; email 9-ASW-FWACO@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

## **Background**

The FAA proposes to adopt a new AD for Brantly Helicopters Industries U.S.A. Co., Ltd., Model 305 helicopters and Brantly International, Inc., Model B-2, B-2A, and B-2B helicopters with T/R hub part number (P/N) 161-1 or 2951 installed. This proposed AD was prompted by a report of a crack in T/R hub P/N 2951. The crack is considered fatigue cracking caused by corrosion pitting. T/R hub P/N 161-1 is also affected by this unsafe condition due to design similarity. This condition, if not addressed, could result in loss of T/R control and subsequent loss of control of the helicopter.

## **FAA's Determination**

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

## **Related Service Information**

The FAA reviewed Brantly Helicopter Service Letter No. 102, dated July 11, 1974 (SL 102). SL 102 specifies repetitively cleaning and inspecting the areas where

each T/R blade attaching arm extends from the T/R hub for a crack. SL 102 also specifies repetitively cleaning and dye penetrant inspecting the radius at the shoulder of each T/R hub spindle for a crack. If there is a crack, SL 102 specifies replacing the part and reporting any cracks to Brantly Operators, Inc.

### **Proposed AD Requirements in this NPRM**

This proposed AD would require repetitively cleaning, and using a 10X or higher power magnifying glass, inspecting the areas where each T/R blade attaching arm extends from the T/R hub for a crack, corrosion, and pitting, and depending on the results, removing the T/R hub from service. This proposed AD would also require repetitively cleaning and dye penetrant inspecting the radius at the shoulder of each T/R hub spindle for a crack and pitting, and depending on the results, removing the T/R hub from service.

### **Differences Between this Proposed AD and the Service Information**

SL 102 applies to all Brantly helicopters, whereas this proposed AD would apply to helicopters with T/R hub P/N 2591 or 161-1 installed. This proposed AD would require using a 10X or higher power magnifying glass when inspecting the area where the T/R blade attaching arm extends from the T/R hub for a crack, corrosion, and pitting, whereas SL 102 does not specify using a magnifying glass and only specifies inspecting for a crack in that area. This proposed AD would require dye penetrant inspecting the radius at the shoulder of each T/R spindle for a crack and pitting, whereas SL 102 only specifies dye penetrant inspecting for a crack in those areas. SL102 specifies reporting any cracks to Brantly Operators, Inc., whereas this proposed AD would not require reporting any information.

### **Costs of Compliance**

The FAA estimates that this AD affects 57 helicopters of U.S. Registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates that operators may incur the following costs in order to comply with this proposed AD.

Cleaning and inspecting the T/R hub with a magnifying glass would take about 1 work-hour for an estimated cost of \$85 per helicopter and \$4,845 for the U.S. fleet, per inspection cycle. Cleaning and dye penetrant inspecting the T/R hub would take about 2

work-hours for an estimated cost of \$170 per helicopter and \$9,690 for the U.S. fleet, per inspection cycle. If required, replacing a T/R hub would take about 0.5 work-hour and parts would cost about \$500 for an estimated cost of \$543 per replacement.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

**Brantly Helicopters Industries U.S.A. Co., Ltd., and Brantly International, Inc.:**

Docket No. FAA-2021-0610; Project Identifier AD-2021-00126-R.

#### **(a) Comments Due Date**

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

This AD applies to Brantly Helicopters Industries U.S.A. Co., Ltd., Model 305 helicopters and Brantly International, Inc., Model B-2, B-2A, and B-2B helicopters, certificated in any category, with a tail rotor (T/R) hub part number 161-1 or 2951, installed.

#### **(d) Subject**

Joint Aircraft System Component (JASC) Code 6420, Tail Rotor Head.

#### **(e) Unsafe Condition**

This AD was prompted by a report of crack in the T/R hub. The FAA is issuing this AD to address cracking of the T/R hub. The unsafe condition, if not addressed, could result in loss of T/R control and subsequent loss of control of the helicopter.

#### **(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Required Actions**

Within 100 hours time-in-service (TIS) or at the next annual inspection after the effective date of this AD, whichever occurs first, and thereafter at intervals not to exceed 100 hours TIS and at each annual inspection:

(1) Clean, and using a 10X or higher power magnifying glass, inspect the areas where each T/R blade attaching arm extends from the T/R hub for a crack, corrosion, and pitting. If there is a crack, corrosion, or pitting, before further flight, remove the T/R hub from service.

(2) Clean and dye penetrant inspect the radius at the shoulder of each T/R hub spindle for a crack and pitting. If there is a crack or pitting, before further flight, remove the T/R hub from service.

**(h) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Fort Worth ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (i) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(i) Related Information**

For more information about this AD, contact Marc Belhumeur, Senior Project Engineer, Certification Section, Fort Worth ACO Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5177; email 9-ASW-FWACO@faa.gov.

Issued on July 26, 2021.

Lance T. Gant, Director,

Compliance & Airworthiness Division,

Aircraft Certification Service.

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